# Capstone Virtual Environment Overview

Overview

In the capstone scenario, you've been hired by Road Runner Consulting as either a Security Analyst or a Security Engineer, and assigned to a critical security project with the ACME Company.

The virtual environment is a group of preconfigured virtual machines designed to emulate the ACME Company's headquarters network. Analysts and Engineers will use the virtual environment to complete tasks and obtain information required for the successful completion of the capstone.

The virtual environment relies on six (6) virtual machines provided as OVA files, which can be found **here** ⤷ **(https://drive.google.com/drive/folders/10OqKTTkOYZTd_-AVSZd3KBojxxLDolGo)** .

> # Noteworthy
>
> Downloading the files from the Google Drive folder will take up approximately 23 GB of disk space on your computer. Installing the virtual machines (VMs) included in the folder will require an additional 55 GB of free disk space. Once the OVA files are installed, and the virtual machines are created, you can delete the OVA files to save space on your computer. However, you may choose to keep the OVA files on your system, or a removable drive, in case you need to restore the virtual machines to their default settings during the capstone exercise

- flatIronOS
- Internal PC1
- Internal PC2
- DMZ Linux Server
- ACME Security Server
- Road Runner Consultant Machine

flatIronOS
⏻ Powered Off

Internal PC-1
⏻ Powered Off

Internal PC-2
⏻ Powered Off

DMZ Linux Server
⏻ Powered Off

ACMEsecurity
⏻ Powered Off

Consultant Machine
⏻ Powered Off

As an employee of a contracting organization, you will either be issued a workstation by your employer, or provided a temporary workstation by the customer. The customer will direct you where to connect to their network from a point they have designated as appropriate for the type of work you are expected to perform. In practice, you should never connect to a customer's network from anywhere other than the explicitly authorized location.

In this scenario, Road Runner has provided you with the Road Runner consultant machine. This system connects to the Security Operations Center segment of the ACME company network. This machine will allow you to perform the necessary tasks required to complete the capstone project.

The hosts on the internal network represent typical types of systems and services found on an internal network. The virtual machines in the DMZ Network act as hosts and services normally found within a demilitarized design zone. Hopefully...

Noteworthy

On some engagements, customers will allow contractors to use their own systems, provided they meet basic system security requirements. If you have developed a virtual machine throughout this course with the tools and services you prefer, you are allowed to use it in the ACME Company environment. However, it is not recommended, and you are entirely and solely responsible for supporting the system. If you choose to use a virtual machine of your own, ensure it is connected to the SOC Network (192.168.30.0/24) on intnet-3.

VirtualBox Configuration

The ACME Company's network is segmented into four zones, the External Zone, the Internal LAN Zone (intnet-1), the DMZ (intnet-2), and the Security Operations Center (SOC) Zone (intnet-3).

The virtual network assignments for each virtual machine are listed below.

Flatiron OS:
  Adapter1: NAT
  Adapter2: intnet-1
  Adapter3: intnet-2
  Adapter4: intnet-3
Internal-PC-1 and Internal-PC-2:
  Adapter1: intnet-1
ACMEsecurity and DMZ Linux Server:
  Adapter1: intnet-2
Road Runner Consultant Machine:
  Adapter1: intnet-3

General

Name: flatIronOS
Operating System: Debian (64-bit)
Groups: Capstone Test Machines

Preview

System

Base Memory: 1204 MB
Boot Order: Floppy, Optical, Hard Disk
Acceleration: VT-x/AMD-V, Nested Paging, KVM Paravirtualization

Display

Video Memory: 8 MB
Graphics Controller: VBoxVGA
Remote Desktop Server: Disabled
Recording: Disabled

Storage

Controller: IDE
Controller: SATA
  SATA Port 0: flatIronOS-disk001.vdi (Normal, 10.00 GB)

Audio

Host Driver: Windows DirectSound
Controller: ICH AC97

Network

Adapter 1: Intel PRO/1000 MT Desktop (NAT)
Adapter 2: Intel PRO/1000 MT Desktop (Internal Network, 'intnet-1')
Adapter 3: Intel PRO/1000 MT Desktop (Internal Network, 'intnet-2')
Adapter 4: Intel PRO/1000 MT Desktop (Internal Network, 'intnet-3')

USB

USB Controller: OHCI
Device Filters: 0 (0 active)

Shared folders

None

Description

None

The username/password for **Internal-PC-1 and Internal-PC-2** is acme/acme123

The username/password for the **Road Runner Consultant Machine** is roadrunner/b33pb33p!

Noteworthy

When importing the OVAs, make certain to select "Include all network adapter MAC addresses" from the MAC Address Policy settings dropdown list.

Appendix

The OVA import process should automatically configure the three (3) internal networks. If not, manually create them after the import:

intnet-1 - This is the internal LAN network

intnet-2 - This is the DMZ network

intnet-3 - This is the Security Operations Center (SOC) network

Have specific feedback?

**Tell us here! (https://flatironschoolforms.formstack.com/forms/canvas_feedback?
CourseID=6641&LessonID=capstone-virtual-environment-
overview&LessonType=pages&CanvasUserID=10700&Course=None)**